

INNOVATIONS IN RURAL AND AGRICULTURE FINANCE

M-PESA: Finding New Ways to Serve the Unbanked in Kenya

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Over the past three years, payment strategies for emerging markets have been revolutionized by the advent of a simple cell-phone-based payment service in Kenya called M-PESA ("M" for "mobile" and "pesa" for "money"). From a small-scale pilot program in 2006, M-PESA has become an outstanding success in Kenya; customer response has been unprecedented. Currently, more than 9 million Kenyans use M-PESA to perform tens of millions of transactions every month throughout the country. Although this success has led to new opportunities, it has also brought about many unforeseen challenges.

What is M-PESA?

Vodafone, the world's leading international mobile communications group, based in the United Kingdom, originally developed M-PESA with funding from the Department for International Development (DFID) as a pilot program to extend the growth of financial markets to the unbanked (people without access to conventional banking services) in East Africa. In March 2007, M-PESA was launched in Kenya in partnership with Safaricom, Kenya's leading mobile telecommunications company. It quickly became clear by the demand from the unbanked that this cell-phone-based, money-transfer business was a welcome commercial opportunity across Africa and elsewhere.

In emerging economies, it is common for some wage earners to work away from home and send domestic remittances back to their extended families in rural areas. The initial focus of M-PESA, therefore, was to enable these workers to send money home via faster, safer, and more affordable means than those previously available to them. M-PESA allows customers to send money home (and make a variety of other payments, described below) without a bank account. People can begin using the system simply by registering for free at certified M-PESA agents, which include retailers such as supermarkets, gas stations, and shops that sell prepaid airtime cards. In fact, several banks have even become M-PESA agents. Customers can use cash to "buy" electronic money (e-money) from an agent, then use their phones to perform financial transactions (for example, to send money to another person or buy additional airtime). The e-money can also be converted into cash by selling it back to an agent. Agents are paid a commission for providing cash-in and cash-out services and for registering customers.

Transaction values are typically low; M-PESA moves smaller amounts of money than banks would normally service. As M-PESA gains acceptance, however, it is also becoming attractive to people who already have bank accounts as a way to pay out wages to, for example, tradesmen and household staff—who are, of course, M-PESA's targeted customers.

M-PESA: Beyond "sending money home"

There is no doubt that giving M-PESA customers the ability to send money home was a feature that filled a gap in the market. Within

two years, M-PESA had become the most frequently used money-transfer mechanism (see Figure 1 in Appendix A).

The need for fast, safe money transfers, particularly to those in rural communities, is obvious; and the benefits have been much reported in the Kenyan press and by nongovernmental organizations. However, by extending functionality and thinking laterally, M-PESA has been expanded to further serve the unbanked of Kenya.

Bill payments

The option for customers to pay their bills via cell phone was recently added to the M-PESA menu. Designed to allow people to pay their regular bills—such as utilities, school fees, and rent—this feature has become a means of payment collection for many other businesses as well. Of particular relevance to rural communities, even the provision of clean drinking water has been improved through the use of M-PESA. Grundfoss, a Danish company, developed an entrepreneurial solar-powered metering system to pump clean water from boreholes into rural areas. Pumps can be paid for by a "smart card" (a prepaid card with a memory chip), but finding means to apply credit to these smart cards in the rural areas where water pumps were situated was a problem—until M-PESA arrived. Customers sent money to Grundfoss using the "Pay Bill" feature, and their smart card was automatically credited and ready to use. This payment system is now available wherever Grundfoss water pumps are deployed.

Additionally, several microfinance institutions (MFIs) are now using M-PESA's bill-paying feature for loan repayment collection. This eliminates the time loan recipients used to spend travelling to urban areas to deposit cash into their MFI bank accounts; this time can now be better spent attending to their farms or small businesses. Similarly, insurance and microinsurance premiums can now be paid using M-PESA.

Business payments

The "Business Payments" feature allows a business to pay a number of customers or employees through their M-PESA accounts. This service was originally introduced at the request of Safaricom's temporary staff working in rural areas. These low-income workers previously had to travel to a Safaricom office in the nearest town to pick up their paychecks and deposit them into bank accounts; it was a time-consuming activity at best. Now they receive their wages directly through their M-PESA accounts. It has proven so popular that the organization recruited to provide M-PESA training to new agents around Kenya actually started to use the payment feature for its own staff expenses. Many other companies are now using M-PESA to pay field operatives working remotely from regional offices. Safaricom also recently offered shareholders the opportunity to receive their annual dividend payments via M-PESA; many thousands of Kenyans—who had become first-time shareholders when Safaricom issued public shares in 2008—accepted the offer.

Agent management tools

In rural areas, the only suitable outlets to become M-PESA agents are often small family-run stores. While it is not commercially feasible for M-PESA to have a direct business relationship with thousands of “Mom-and-Pop” shops across Kenya, a partnership of some kind would be advantageous to all parties. To resolve this conundrum, M-PESA created the aggregator model in which a distributor is appointed to recruit and manage agents in these small stores and in return gets a share of the M-PESA commission earned by that store.

To further accommodate the growing system, M-PESA had to address the issue that when an agent runs out of “float”—either e-money or cash—they cannot service their customers. With the huge expansion, getting more e-money into the system was a requirement and, oftentimes, a challenge since conventional banking takes some time to clear deposits before new e-money can be issued, during which time an agent who has run out cannot offer M-PESA. To reduce this problem, larger agents rich in cash or e-money were given the ability to act as agents to smaller shops. Thus, a smaller outlet can now buy or sell e-money from one of these larger, richer “super agents.” Float management is a particular problem in rural areas where agents tend to net more withdrawals than deposits, or, in other words, they tend to be e-money rich but cash poor. The capability of these super agents has helped speed up the turnaround of e-money and cash, allowing small agents to have less money tied up in M-PESA and yet still have more float available.

Bank branches that were reluctant to become regular M-PESA agents for customers conducting small transactions have been happy to act as super agents for businesses operating with larger sums. This also gives these banks the opportunity to promote and sell their banking services to more businesses. Many small business owners acting as M-PESA agents now have their first ever bank account.

Banking services

M-PESA is now giving cell-phone users access to formal banking services. In May 2010 Safaricom and Equity Bank, a leading bank in Kenya, launched an initiative to offer every M-PESA user the opportunity to open a savings account. Customers use M-PESA to both deposit money into and withdraw money from their savings accounts. Called M-KESHO (*kesho* is Swahili for “tomorrow”), this service effectively gives millions of rural Kenyans access to banking services for the first time.

M-PESA: Perks and pitfalls

It became clear soon after M-PESA's launch that the service provided an effective and convenient means of making any sort

of person-to-person money transfer, and subscriber numbers grew well beyond projections. Initial predictions estimated 320,000 users in the first year of trading: Nine months after launch, M-PESA registered its one millionth customer. It was an exciting success. As with any new business that unexpectedly finds itself growing much faster than anticipated, however, there were numerous implications, each with significant costs.

- **Budget flexibility:** The rapid growth required a significantly reworked budget. For example, customer acquisition costs money because agents have to be paid to register customers, and the cost of new SIM cards—which are free to new customers—needs to be covered. It takes time for new customers to become mature users and start generating revenue, so signing up more than 10,000 new customers per day had a serious impact on cash flow in the early life of the product.
- **Customer support:** M-PESA needed a significantly larger call center and a lot more customer service representatives than were originally anticipated.
- **System capacity:** At the time of M-PESA's launch, the system had a technical design that could cope comfortably with the original business case plus a sensible safety margin; this capacity was rapidly exceeded and had to be regularly expanded to include new features at significant expense.
- **Managing agent demand:** A sufficient number of agents had to be sought out, enrolled, and trained. As retailers and outlets came to understand the business opportunity, however, the situation reversed; their demand was such that the Safaricom sales office had to cater to the crowds of would-be agents. Extra staff members were also required to process applications and provide ongoing agent training.

Conclusion

As problems go, those associated with rapid growth are the best kind to have, but they are challenging nonetheless. Substantial costs were incurred far earlier than anticipated, pushing back the expected break-even date. Working on the basis that budget shortfall would soon be forgotten while unexpected customer growth would be remembered for years to come, M-PESA managed to secure additional funds. Now, alongside increasing demand, a critical mass of mature customers is growing to support the need for revenue. There is still much to do, but as M-PESA approaches its third birthday in Kenya, it is well prepared to tackle whatever comes next. ■

See more information at www.safaricom.co.ke/index.php?id=745.

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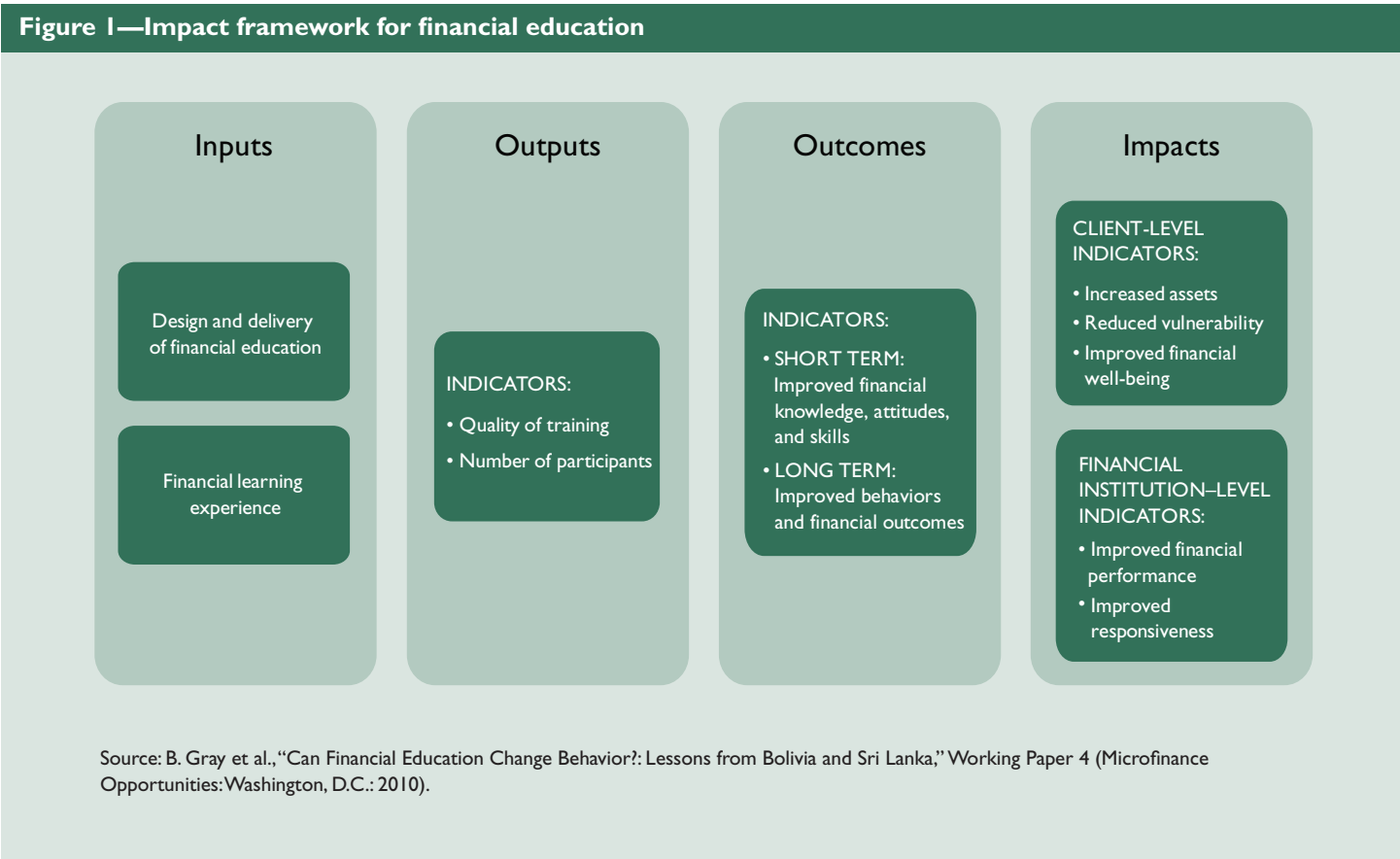


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APPENDIX A: Supplementary Material

Brief 2, “Financial Literacy,” by Monique Cohen



Brief 8, “M-PESA: Finding New Ways to Serve the Unbanked in Kenya,” by Susie Lonie

